

# Hudson Bay Mining and Smelting Co., Limited

## annual report 1974

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## Hudson Bay Mining and Smelting Co., Limited

### Head Office

P.O. Box 28, Toronto-Dominion Centre,  
Toronto, Ontario M5K 1B8

### Transfer agents:

The Royal Trust Company—  
Montreal, Toronto, Winnipeg,  
Regina, Calgary, Vancouver.  
Morgan Guaranty Trust Company  
of New York—New York, N.Y.

### Registrars

Montreal Trust Company—  
Montreal, Regina.  
Crown Trust Company—  
Toronto, Winnipeg, Calgary, Vancouver.  
The Chase Manhattan Bank—New York, N.Y.

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### Directors

- \*H.R. Fraser, Toronto  
Chairman, Hudson Bay Mining
- M.B. Hofmeyr, London  
Managing Director, Charter Consolidated Limited  
A mining-finance house
- R.H. Jones, Winnipeg  
President and Chief Executive Officer,  
The Investors Group  
A financial holding company
- \*A.T. Lambert, Toronto  
Chairman and Chief Executive Officer,  
The Toronto-Dominion Bank  
A Canadian chartered bank
- C.S. Lee, Calgary  
Chairman, Western Decalta Petroleum Limited  
An oil and gas company
- \*H.A. McKenzie, Toronto  
President, Hudson Bay Mining
- H.C.F. Mockridge, Q.C., Toronto  
Senior Partner, Osler, Hoskin & Harcourt  
Barristers and solicitors
- W.A. Morrice, Toronto  
Former President, Hudson Bay Mining  
Retired
- G.W.H. Relly, Johannesburg, South Africa  
Executive Director, Anglo American Corporation of  
South Africa Limited  
A mining-finance house
- A. Sweatman, Q.C., Winnipeg  
Senior Partner, Thompson, Dorfman & Sweatman  
Barristers and solicitors
- \*J.D. Taylor, Q.C., Toronto  
President, Anglo American Corporation of Canada Limited  
A mining-finance house
- G.H. Waddell, Johannesburg, South Africa  
Executive Director, Anglo American Corporation of  
South Africa Limited  
A mining-finance house

W.A. Green  
Director Emeritus

\*Member of the Executive Committee

### Officers

- H.R. Fraser  
Chairman
- H.A. McKenzie  
President
- J.S. Warick  
Senior Vice-President—Operations
- J.L. Carpenter  
Senior Vice-President—Marketing
- N.G. Ashby  
Vice-President—Industrial Relations
- K.S. Dalton  
Vice-President—Finance
- J. Debray  
Vice-President—Petroleum
- A.M. Doull  
Vice-President
- Dr. J.B. Howkins  
Vice-President—Exploration
- L.W. Ogryzlo  
Vice-President—Development
- J.R.G. Sadler  
Vice-President—Mining
- Dr. C.L. Sarthou  
Vice-President—Market Development
- D.C. Smith  
Vice-President—Mexican Operations
- C.K. Taylor, Q.C.  
Vice-President, Secretary and General Counsel
- G.A.C. MacRae  
Treasurer
- E.P. Haggarty  
Comptroller
- S.A. Hayward  
Assistant Secretary and Assistant Treasurer
- Miss S. Kozel  
Assistant Secretary
- P.H. Page  
Assistant Treasurer

## Report of the Directors

Three of the concerns that we expressed in our Annual Report last year have been all too amply realized: the downturn in metal prices, the continuance of inflation and the prevalence of excessive, not to say confiscatory, taxation.

That your Company's earnings, in spite of this, totalled \$38,578,917 for 1974, second only to last year's record \$47,293,830, is due in large measure to the steps that have been taken over recent years to meet these hazards. These have resulted in substantial changes in the structure of your investment, of which you would be aware.

In 1973 our base-metal operations accounted for 80% of earnings before taxes and minority interests—but only 44% in 1974. Earnings from our various fertilizer, chemical and industrial minerals operations rose from 17% of 1973 earnings to 37% in 1974, two-thirds of the increase coming from our investments in Terra Chemicals International, Inc., in the U.S., and our sodium sulphate operation. Oil, for the first time, became a significant contributor to profits, accounting for 19% in 1974, a proportion that should increase substantially in future.

The snuffing out of opportunity in the Canadian resources field by the damper of taxation has forced us to look beyond our frontiers and during 1974 some \$82 million were spent or committed by your Company and its affiliates on foreign projects. It should be remarked that this has not been done at the expense of existing operations or the communities that depend on them as is demonstrated by the expenditure of \$47,900,000 on exploration, development, plant upgrading and other capital expenditure during 1974 and planned expenditure in excess of \$40 million for the current year.

With the developments of the past year we feel that your Company has made the transition from a purely Canadian producer of copper and zinc to a diversified and broadly based resources-oriented organization with a strong international element, especially in North America and in oil ventures. We will continue to seek opportunities of growth and diversification in Canada and abroad whenever suitable projects can be found, provided the fiscal system permits returns commensurate with the risk of the investment.

In your perusal of the accounts presented to you in this Report there is another change that should be drawn to your attention. Last year the practice of equity accounting was introduced for the first time in our accounts. This called for little comment as the results were not greatly different from what they would have been under the old system. This year, as a result of the changes to which we have referred, \$9,129,358, or 24% of net earnings, are represented by equity earnings. This means that while all the funds represented by these earnings are available for the development of our business through the various companies in which we are invested, only such portion as is paid to us in the form of dividends is available for our own specific purposes.

### Directors

Three new Directors were appointed at a meeting of the Board on March 20, 1975: G.H. Waddell, M.B. Hofmeyr and R.H. Jones. Their appointments fill the vacancies created by the resignations of M.W. Rush, E.S. Austin and J.F. McCarthy.

Mr. Waddell is an Executive Director of Anglo American Corporation of South Africa Limited. Mr. Hofmeyr, also an Executive Director of the Corporation, is Managing Director of Charter Consolidated Limited, of London, and a Director of Anglo American Corporation of Canada Limited (Amcan). Mr. Jones is President and Chief Executive of The Investors Group and a Director of Amcan.

Mr. Rush had been a Director of the Company since 1962, Chairman from 1964-1970 and President from 1964-1966. An Executive Director of the Anglo American Corporation from 1961 until his retirement on June 30, 1973, Mr. Rush directed the Corporation's entry into North America in 1963. His distinguished leadership while Chief Executive Officer of the Company and his wise counsel on the affairs of the Company since his return to Johannesburg in 1970 are gratefully acknowledged.

Mr. Austin had been a Director since 1961. He retired as President of the Company on September 17, 1971, completing 38 years of service. Mr. Austin joined the Company as an operator in the zinc refinery in 1933 and eventually was appointed President in 1966. His many contributions to the growth of the Company are deeply appreciated and his broad knowledge of the Company's affairs are greatly missed by the Board.

Mr. McCarthy had been a Director since 1959 and his resignation ended an association with the Company that spanned 42 years, including 36 years as an employee. He joined the Company in New York in 1933 as an accountant and retired on June 30, 1969, in Toronto as Secretary-Treasurer.

### Executive appointments

The following appointments were made during the year: Jean Debray, Vice-President—Petroleum; Earl P. Haggarty, Comptroller; Kenneth S. Dalton, Vice-President—Finance; Garth A.C. MacRae, Treasurer; Noel G. Ashby, Vice-President—Industrial Relations; Donald C. Smith, Vice-President—Mexican operations.

The following four appointments became effective January 1, 1975: Dr. Charles L. Sarthou, Vice-President—Market Development; Miss Shirley Kozel, Assistant Secretary; Adrian M. Doull, a Vice-President; Peter H. Page, Assistant Treasurer. The latter two appointments were made in conjunction with the assumption of certain corporate responsibilities that will be administered by the Company for an appropriate fee on behalf of Amcan, the Company's principal and controlling shareholder.

### Acquisitions and changes in holdings

Francana Oil & Gas Ltd., in which the Company has a 55% interest, substantially strengthened its international position by increasing its interest in Trend Exploration Limited from 30% to 57%. Trend, based in Denver, Colo., has had a number of successes in Canada, the U.S. and in Indonesia where it acts as the operator of, and holds a 27% working interest in, the Production-Sharing Contract with Pertamina, the Indonesian state-owned oil company. Control of Trend greatly reduces Francana's dependency on its operations in Canada where exploration is becoming less and less attractive because of recent provincial and Federal tax legislation.

Financial details of the increase in interest in Trend are given in Note 11 to the Consolidated Financial Statements on page eight. The review of operations of both Francana and Trend begins on page 23.

The Company and Diamond Shamrock Corporation, of Cleveland, on March 5, 1975, jointly announced agreement in principle for the Company to purchase from Diamond Shamrock 1,044,349 common shares of Terra Chemicals, which would raise the Company's

interest in Terra from approximately 31% to approximately 51%. The agreed price per share is \$U.S. 14, to be paid in cash.

In addition, the Company has agreed to purchase from Diamond Shamrock \$6 million of Terra 7% preferred shares to be paid for in five equal instalments over a five-year period by way of a 9% promissory note.

The transaction is subject to the approval of the directors of the Company and of Diamond Shamrock, to execution of a definitive agreement, and will take effect on July 1, 1975.

Terra, a major manufacturer of chemical fertilizers, other crop production chemicals and feed ingredients, has for some years been the major U.S. sales agent for potash produced by the Company's Sylvite of Canada division. See Note 14 on page nine.

The Company and Amcan on June 26 purchased from Patino, N.V., of the Hague, its 58.1% interest, representing 2,898,291 shares, in Lytton Minerals Limited, of Vancouver, for \$2.75 per share. This joint interest, shared equally, has been increased to 67.2%.

Lytton at that time held a 49% interest in Minas del Otoño, S.A., of Mexico, which owns the La Verde copper deposit at Gabriel Zamora, Michoacan, 200 miles west of Mexico City. Subsequently, discussions were initiated for the acquisition of the remaining 51% by certain Mexican investors.

On October 29, Lytton, the Mexican Government and a private Mexican company signed an agreement in Mexico City to develop La Verde. Under the agreement, Lytton holds a 48% equity interest in Minas del Otoño, S.A., to be recapitalized and renamed Compania Cuprifera La Verde, S.A., with the balance shared equally between Comisión de Fomento Minero, an agency of the Mexican Government, and Desc, Sociedad de Fomento Industrial, S.A. de C.V., a private industrial holding company. The Company will provide technical assistance for the project. The total cost of the project, including advances already made by Lytton, and making provision for financing charges and working capital, is estimated at \$101 million.

Earlier feasibility studies were revised during the year and planning for development of the property was well

advanced at year-end. The two orebodies, together containing proven reserves (estimated by Lytton) of 81.3 million short tons grading 0.699% copper plus gold and silver values, will be mined by the open-pit method. Ore will be fed to the processing plant at the rate of 15,000 metric tons per day, resulting in an annual production of concentrates containing 75 million pounds of copper, 14,000 ounces of gold and 400,000 ounces of silver.

The current plan is to include provision for expansion of ore treatment to 20,000 metric tons per day. The construction and development phases of the project are estimated to take three years and it is hoped that construction can be started around mid-1975. Production of concentrates should begin around the end of the 1st quarter of 1978, according to present plans.

The Company has an equity interest in each of two companies formed early in 1974 to use Airtrace, an airborne biogeochemical exploration system patented by Barringer Research Ltd., of Toronto.

Minsearch Surveys Limited was formed in February by Barringer and Amcan; Barringer holds a 50% interest and the remainder is held by Amcan, Minerals and Resources Corporation Limited (Minorco) and the Company. Amcan is managing the company. Ronald L. Price, formerly Central exploration manager, Hudson Bay Exploration and Development Company Limited, a wholly owned subsidiary of the Company, was seconded to Minsearch and appointed General Manager.

Amcan and Barringer formed Barringer Hydrocarbons Limited to search for hydrocarbons, using the Airtrace system. The company, managed by Barringer, is held 70% by Barringer and the balance by Amcan, Minorco and the Company. Minsearch has a contract to conduct airborne operations for Barringer Hydrocarbons.

Both exploration companies have been granted an exclusive licence to use the Airtrace system. However, the services of both companies are available to other natural-resource firms on commercial terms, subject to pre-existing contracts and certain geographical limitations.

At the Company's Annual and Special General Meeting held on April 26, 1974, shareholders approved a

previously announced agreement to purchase a 37.8% equity interest in, plus a \$5-million 7% convertible debenture of, Western Decalta Petroleum Limited, of Calgary, from Amcan for a \$30-million combination of shares and cash. The 37.8% interest represents 3,104,512 common shares and if the debenture were converted to common shares, the Company's interest would increase to 44.6%.

During the year the Company increased its interest in Whitehorse Copper Mines Ltd. from 5.3% to 20.6% and acquired a 23.1% interest in Canadian Merrill Ltd.

## Outlook

There is little doubt that 1975 will be a difficult one for business as a whole. There was virtually no growth in the Canadian economy during the last half of 1974 and the first half of 1975 shows little potential for improvement. The automobile industry and housing are suffering a severe economic downturn and inflation continues to erode real purchasing power.

The mining industry has been particularly vulnerable to the effects of the current economic situation. Demand for most base metals, which fell sharply in the latter part of 1974, is still weak and inventories continue to rise. The price for copper, one of the Company's two main metal products, has fallen sharply since mid-1974, when it reached a record high. The continuing firm price for zinc has only been maintained at the expense of reduced production and rising inventories. It seems unreasonable to expect a substantial improvement in copper prices or an increase in demand for copper and zinc in the absence of any real improvement in the North American economy.

Prospects for gold in 1975 remain attractive. The price at the beginning of 1974 was \$115 per oz. and reached almost \$200 per oz. just prior to year-end before falling to the \$180 per oz. level following the U.S. Treasury bullion offering on January 6, 1975. Presuming that inflationary pressures will persist along with the continuing lack of confidence in paper currencies, the gold market should be relatively firm.

Although world demand for potash and other fertilizers remains strong, future earnings of the Company's Sylvite division will likely be sharply curtailed as a result of the Saskatchewan government's new tax legislation.

Terra Chemicals also should benefit from the worldwide demand for fertilizers, particularly those based on nitrogen, and expectations are that Terra will continue to contribute substantially to our net earnings.

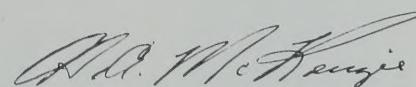
Uncertainty still prevails throughout the Canadian oil and gas industry as the provincial and Federal governments continue their differences over the sharing of tax revenues. Fortunately, however, our major oil interests are in Indonesia where Trend is increasing its production facilities. Present indications are that oil's contribution to the Company's profits in 1975 will be considerably higher than the 19% accounted for in 1974.

Even though it is recognized that inflation is a universal problem, governments at all levels in Canada appear reluctant to take the necessary steps within their capabilities to restore a measure of stability and to promote the renewed growth needed to reverse the current slowdown in the economy. In any case, even under improved economic conditions, the momentum of the Canadian mining industry can only be regained by appropriate government fiscal initiatives that take into account the special problems faced by mining companies and permit a return on investment that will provide the necessary incentives for renewed exploration and expansion of existing facilities.

On behalf of the Board,



Chairman



President

March 20, 1975

*Hydroelectric plant at Island Falls*



**Consolidated statement of financial position**  
as at December 31, 1974 and 1973

The accompanying notes are an integral part of the financial statements.

	1974	1973
<b>Current assets:</b>		
Cash and short-term deposits	\$ 26,642,208	\$ 33,036,251
Accounts receivable	24,392,840	32,835,790
Inventories (Note 2)	29,030,813	35,057,638
Total current assets	<b>80,065,861</b>	100,929,679
Deduct:		
<b>Current liabilities:</b>		
Accounts payable and accrued liabilities	34,265,749	30,387,599
Income and other taxes payable	11,489,000	7,045,391
Dividend payable	3,976,663	8,947,290
Loans from associated company	6,944,254	—
Current portion of long-term debt	2,380,000	576,000
Total current liabilities	<b>59,055,666</b>	46,956,280
<b>Working capital (Note 16)</b>	<b>21,010,195</b>	53,973,399
Add:		
<b>Marketable securities—at cost</b>		
(Market value 1974—\$1,625,938; 1973—\$2,563,281)	2,541,190	2,541,190
<b>Investment in joint venture—at equity value</b>	1,622,750	2,026,451
<b>Investments in other companies (Notes 3 and 15)</b>	61,370,344	50,823,244
<b>Property, plant and equipment (Note 4)</b>	206,475,059	96,582,987
<b>Other assets:</b>		
Unamortized mine development expenditures	35,118,614	35,801,288
Materials and supplies—at cost	9,187,646	6,393,039
Sundry assets and deferred charges—at cost (Note 15)	7,591,720	5,089,090
	51,897,980	47,283,417
<b>Capital employed</b>	<b>344,917,518</b>	253,230,688
Deduct:		
<b>Long-term debt (Note 5)</b>	28,509,800	27,778,000
<b>Deferred income taxes</b>	29,283,000	22,544,000
<b>Minority interest in subsidiaries (Note 11)</b>	69,826,794	8,289,107
	127,619,594	58,611,107
<b>Shareholders' investment</b>	<b>\$217,297,924</b>	\$194,619,581
<b>Investment represented by:</b>		
Capital stock—issued and fully paid—		
9,941,658 no par value common shares		
(1973—9,941,433 shares) (Notes 6, 9 and 15)	\$ 68,442,435	\$ 68,436,356
Retained earnings	148,855,489	126,183,225
<b>Total shareholders' investment</b>	<b>\$217,297,924</b>	\$194,619,581

Approved by the Board of Directors

Director: H. R. Fraser

Director: H. A. McKenzie

**Hudson Bay Mining and Smelting Co., Limited  
and subsidiary companies**

**Consolidated statement of earnings**

For the years ended December 31, 1974 and 1973

The accompanying notes are an integral part of the financial statements.

	<b>1974</b>	<b>1973</b>
<b>Revenue:</b>		
Sales of product	\$216,338,568	\$181,645,817
Less freight, refining and selling expenses	14,011,382	14,780,855
	<b>202,327,186</b>	166,864,962
<b>Costs and expenses:</b>		
Production costs (Note 7)	114,697,901	88,697,052
Amortization of mine development expenditures	6,569,283	6,239,110
Depreciation and depletion	9,994,704	7,106,652
Exploration expenses	4,213,871	2,918,867
General administrative expenses	4,423,203	3,099,622
Interest and other long-term debt expense	3,165,253	2,562,886
	<b>143,064,215</b>	110,624,189
<b>Earnings before taxes and other income</b>	<b>59,262,971</b>	56,240,773
<b>Other income (Note 8)</b>	<b>5,528,597</b>	5,359,937
<b>Earnings before taxes</b>	<b>64,791,568</b>	61,600,710
<b>Income taxes, mining taxes and royalties:</b>		
Mining taxes and royalties	10,643,801	7,080,888
Income taxes	19,855,000	9,094,000
	<b>30,498,801</b>	16,174,888
<b>Earnings from operations</b>	<b>34,292,767</b>	45,425,822
<b>Other deductions:</b>		
Provision for future write-offs of investments	540,000	1,850,000
Minority interest in earnings of subsidiaries	4,303,208	551,687
	<b>4,843,208</b>	2,401,687
	<b>29,449,559</b>	43,024,135
<b>Equity in earnings of associated companies (Notes 3 and 15)</b>	<b>9,129,358</b>	1,565,695
<b>Earnings before extraordinary item</b>	<b>38,578,917</b>	44,589,830
<b>Extraordinary item (Note 17)</b>	<b>—</b>	2,704,000
<b>Net earnings for the year (Note 15)</b>	<b>\$ 38,578,917</b>	\$ 47,293,830
<b>Earnings per share (Note 15)</b>		
Before extraordinary item	\$ 3.88	\$ 4.77
After extraordinary item	\$ 3.88	\$ 5.06

**Consolidated statement of retained earnings**

For the years ended December 31, 1974 and 1973

<b>Retained earnings at beginning of the year</b> —as restated (Note 15)	<b>\$126,183,225</b>	\$ 98,142,261
<b>Net earnings for the year</b>	<b>38,578,917</b>	47,293,830
	<b>164,762,142</b>	145,436,091
<b>Dividends (Note 15)</b>	<b>15,906,653</b>	19,252,866
<b>Retained earnings at end of the year</b>	<b>\$148,855,489</b>	\$126,183,225

**Consolidated statement of changes  
in financial position**

For the years ended December 31, 1974 and 1973

The accompanying notes are an integral part of  
the financial statements.

<b>Source of funds:</b>		
<b>Operations:</b>		
Earnings from operations	\$ 34,292,767	\$ 45,425,822
Depreciation, depletion and amortization of mine development expenditures	16,563,987	13,345,762
Deferred income taxes	6,739,000	5,857,000
Share of earnings of joint venture	(1,174,076)	(1,076,451)
	<b>56,421,678</b>	63,552,133
Dividends from associated companies	1,666,207	—
Cash distribution from joint venture	1,463,777	—
Contribution from Wellgreen operations	—	2,704,000
	<b>59,551,662</b>	66,256,133
Issue of securities by subsidiaries to minority interest	56,577,270	1,260,801
Realization of investments	1,926,372	1,844,209
Proceeds from long-term debt	4,501,200	576,000
Issue of shares under options	6,079	—
Issue of shares (Note 15)	—	22,500,000
	<b>122,562,583</b>	92,437,143
<b>Application of funds:</b>		
Dividends	15,906,653	19,252,866
Investment in Trend Exploration Limited (Note 11)	72,456,000	5,192,110
Investment in other companies (Note 15)	14,483,779	35,944,504
Additions to property, plant and equipment	37,752,123	13,854,028
Mine development expenditures	5,886,609	4,322,626
Reduction of long-term debt	3,880,133	576,000
Decrease in minority interest	—	47,600
Increase in materials and supplies (Note 16)	2,794,607	83,777
Increase in sundry assets	2,365,883	702,179
	<b>155,525,787</b>	79,975,690
<b>Increase (decrease) in working capital</b>	<b>(32,963,204)</b>	12,461,453
<b>Working capital at beginning of the year</b>	<b>53,973,399</b>	41,511,946
<b>Working capital at end of the year</b>	<b>\$ 21,010,195</b>	\$ 53,973,399

**Auditors' report**

To the Shareholders of  
Hudson Bay Mining and Smelting Co., Limited:

We have examined the consolidated statement of financial position of Hudson Bay Mining and Smelting Co., Limited and subsidiary companies as at December 31, 1974 and 1973, and the consolidated statements of earnings, retained earnings and changes in financial position for the years then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We did not examine financial statements with

respect to certain investments which are reflected in the accompanying financial statements using the equity method of accounting and the earnings from which comprise approximately 16% and 5% of the consolidated net earnings for the years 1974 and 1973 respectively. The financial statements, with respect to these investments, were reported upon by other auditors and our opinion, insofar as it relates to the amounts included for such investments, is based solely upon the reports of the other auditors.

In our opinion, based upon our examination and the reports of other auditors, these consolidated financial statements present fairly the financial position of the companies as at December 31, 1974 and 1973, and the

results of their operations and the changes in their financial position for the years then ended, in accordance with generally accepted accounting principles applied (except for the change effective January 1, 1973, with which we concur, from the cost to the equity method of accounting for investments in associated companies as explained in Note 3 to the consolidated financial statements) on a consistent basis.

**Deloitte, Haskins & Sells**

Chartered Accountants

Toronto, Canada, February 21, 1975.

(March 5, 1975, with respect to Note 14 to the financial statements)

**Hudson Bay Mining and Smelting Co., Limited  
and subsidiary companies**

**Notes to the consolidated financial statements  
December 31, 1974 and 1973**

**1. Summary of significant accounting policies**

**Principles of consolidation:**

The consolidated financial statements include the accounts of Hudson Bay Mining and Smelting Co., Limited and all companies more than 50% owned. In addition, the Company follows the equity method of accounting for its interest in companies 20% to 50% owned, as more fully explained in Note 3.

**Foreign exchange:**

Foreign currencies have been translated into Canadian dollars as follows: revenue, costs and expenses of foreign subsidiaries at the average rate of exchange for the period; noncurrent assets (including depreciation, depletion and amortization thereof) and noncurrent liabilities at rates in effect at dates of transactions; current assets and liabilities at rates in effect at year-end.

**Inventories, materials and supplies:**

Inventories of finished metals are valued at estimated sales value and provision is made for all costs relating to the sale of these metals. All other salable products are valued at the lower of cost or net realizable value. Work in process, materials and supplies are valued at cost.

**Property, plant and equipment:**

Exploration costs with respect to mines operating or in the development stage are capitalized as mineral properties; all other exploration costs are written off to expense as incurred. Oil and gas properties are accounted for on the full-cost basis whereby all costs relating to the exploration for and the development of oil and gas resources are capitalized whether productive or nonproductive.

**Depreciation and depletion:**

Depreciation of base-metal plant and equipment and depletion of mineral and oil and gas properties are charged to operations by the unit-of-production method based on estimated recoverable reserves. De-

preciation of industrial mineral and other plant and equipment is charged to operations on a straight-line basis over the estimated useful lives of the plant and equipment.

**Amortization of mine development expenditures:**

Mine development expenditures are charged to operations on a unit-of-production method based on estimated recoverable reserves.

**Deferred income taxes:**

Deferred income taxes represent tax reductions for expenditures on mine development, mineral and oil properties, cost of participation in certain mining companies, and depreciation deducted in the determination of taxable income but not yet charged to earnings.

**2. Inventories**

Inventories comprise the following:

	1974	1973
Finished metals	\$ 20,612,487	\$ 30,189,438
Metals in process	5,288,102	3,429,076
Manufactured and other products	3,130,224	1,439,124
	<b>\$ 29,030,813</b>	<b>\$ 35,057,638</b>

**3. Investments in other companies**

	1974	1973
Associated companies—see below	\$ 58,020,528	\$ 44,704,365
Other—at cost:		
Quoted (market value)		
1974—\$287,437;		
1973—\$666,375)	608,552	1,375,655
Unquoted	8,484,667	10,041,386
	<b>9,093,219</b>	<b>11,417,041</b>
Less provision for future write-offs	5,743,403	5,298,162
	<b>3,349,816</b>	<b>6,118,879</b>
	<b>\$ 61,370,344</b>	<b>\$ 50,823,244</b>

Until December 31, 1972, investments in all companies other than subsidiaries were accounted for on the cost basis, and any diminution in the underlying value of investments of this nature was recognized by charging to earnings. Commencing January 1, 1973, the Company adopted the equity method of accounting for investments in associated companies in which it owns

from 20% to 50% of the common shares. Under this method, the Company records as earnings its share of the earnings or losses of (rather than dividends received from) these companies.

The investment in associated companies at December 31, 1974, comprises the following:

	% of Common Share Ownership	Underlying Equity In Net Assets
Terra Chemicals International, Inc.	29.9%	\$11,403,000
Western Decalta Petroleum Limited	37.8%	16,658,000
Canadian Merrill Ltd.	23.1%	5,683,000
Whitehorse Copper Mines Ltd.	20.6%	2,298,000
Lytton Minerals Limited	33.6%	1,525,000
Ambay Services Ltd.	50.0%	Nil

The unamortized excess cost over the underlying equity in the net assets at the date of acquisition, amounting to \$20,450,000, is included in the investments in associated companies and is being written off against the Company's share of earnings therefrom, generally over a period of 20 years.

**4. Property, plant and equipment**

The following is a summary of property, plant and equipment at cost by major category:

	1974	1973
Mineral properties	\$ 19,452,931	\$ 19,322,718
Base-metal plant and equipment	104,573,195	87,847,246
Industrial mineral plant and equipment	49,087,213	45,904,354
Oil and gas properties, plant and equipment	123,675,637	26,753,703
Other property, plant and equipment	12,433,916	8,595,862
	<b>309,222,892</b>	<b>188,423,883</b>
Less: Accumulated depreciation	79,967,969	73,702,323
Accumulated depletion	22,779,864	18,138,573
	<b>102,747,833</b>	<b>91,840,896</b>
	<b>\$206,475,059</b>	<b>\$ 96,582,987</b>

## 5. Long-term debt

Long-term debt comprises the following:

	1974	1973
9% unsecured debentures maturing June 15, 1991	\$ 25,000,000	\$ 25,000,000
Debentures purchased for cancellation	1,885,000	—
	<b>23,115,000</b>	25,000,000
Bank production loans	3,354,000	3,354,000
Loan from associated company (U.S.\$4,000,000, interest-free, repayable in equal yearly instalments of U.S.\$1,333,333)	3,925,200	—
Bank loan (U.S.\$500,000)	495,600	—
	<b>30,889,800</b>	28,354,000
Less amount included in current liabilities	2,380,000	576,000
	<b>\$ 28,509,800</b>	\$ 27,778,000

(a) Under the trust indenture covering the 9% unsecured debentures, sinking fund payments sufficient to retire \$800,000 of principal amount each year from 1977 to 1990 inclusive are required. The Company has the option to redeem the debentures at prices ranging downward from 107.35% currently to 100% in 1989 and thereafter. Debentures redeemed through the operations of the sinking fund are callable at par.

(b) The bank production loans are repayable in monthly instalments of \$48,000, plus interest at rates approximating prime bank rate. These loans are secured by an assignment of a subsidiary's interest in certain petroleum producing properties.

(c) The bank loan is repayable in monthly instalments of U.S.\$55,000, plus interest at the greater of 2½% above the prime commercial rate of a New York bank or 3½% over the weekly average of 90-day U.S. Treasury bills and is secured by an assignment of a subsidiary's interest in certain petroleum producing properties.

## 6. Capital stock

On May 27, 1974, the Company obtained supplementary letters patent which reclassified the existing 12,000,000 shares without par value, as 12,000,000 Class "A" convertible common shares without par value, and increased the authorized capital of the Company by the creation of an additional 3,000,000 Class "A" convertible common shares without par

value and 15,000,000 Class "B" convertible common shares without par value.

The Class "A" and Class "B" shares are freely interconvertible at any time, on a one-for-one basis, at the option of the shareholder and rank equally in all respects, except that it is the Company's intention to pay tax-deferred dividends to the Class "B" shareholders out of 1971 capital surplus, as defined in the Canadian Income Tax Act. For Canadian income tax purposes, tax-deferred dividends are not taxable when received by the shareholder, but reduce the adjusted cost base of the shares for capital gains determination.

At December 31, 1974, 5,497,258 Class "A" shares and 4,444,400 Class "B" shares were issued and fully paid. During 1974, the issue, on a retroactive basis, of 900,000 shares relative to the investment in Western Decalta Petroleum Limited was approved by the shareholders (see Note 15) and 225 shares were issued for \$6,079 cash under the Company's share option plans (see Note 9).

## 7. Production costs

Production costs include the cost of outside purchases of concentrates for processing in the Company's metallurgical plants. These purchases amount to \$48,625,000 in 1974 and \$33,925,000 in 1973.

## 8. Other income

This amount comprises the following:

	1974	1973
Share of earnings of joint venture	<b>\$1,174,076</b>	\$1,076,451
Interest income	3,391,888	2,415,373
Gain on sale of marketable securities	—	481,248
Sale of power, revenue from custom treatment of concentrates and miscellaneous income	<b>962,633</b>	1,386,865
	<b>\$5,528,597</b>	\$5,359,937

## 9. Share option plans

Under the Company's Share Option Plans for Full-Time Officers and Key Employees, 368,000 unissued shares were reserved for granting of options at prices not less than 95% of the market value (full market value in the case of United States citizens) on the day the option is granted.

No options were granted during 1974 and 1973. In 1974, 225 options were exercised at \$27.01 per share (1973—nil) and options on 1,430 shares terminated (1973—5,275 shares).

As of December 31, 1974, 212,715 shares were available for future grants and 79,460 shares (21,175 for officers) granted December 14, 1972, were subject to outstanding options at \$19.65 per share until December 13, 1977.

## 10. Pension fund

The unfunded past service cost with respect to the Company's pension plans was approximately \$11,400,000 as at December 31, 1974, including vested benefits of approximately \$8,000,000, and is being funded over the next 14 years as recommended by the Company's actuarial consultants.

## 11. Investment in Trend Exploration Limited

On May 21, 1974, a subsidiary, Francana Oil & Gas Ltd., through one of its subsidiaries, Trend International Limited, acquired approximately 70% of the shares of Trend Exploration Limited which represented substantially all of the shares of that company not already owned by Francana. The remaining outstanding shares of Trend Exploration were purchased before the year-end. The total cost of the shares acquired was \$74,946,667 which included the following noncurrent assets and liabilities at June 30, 1974, the effective date of acquisition for financial reporting purposes:

Oil and gas properties, plant and equipment, less accumulated depletion and depreciation	\$81,528,906
Other assets	136,747
Long-term debt	(110,733)
	81,554,920
Investment in Trend Exploration at effective date of acquisition (including equity in earnings)	9,098,920
Cost of acquisition, less working capital acquired—\$2,490,667	\$72,456,000

The excess of the cost of the investment in Trend Exploration over the underlying equity in the net assets at the various dates of acquisition of the shares, amounted to \$66,797,810. This amount has been

ascribed to oil and gas properties and is being amortized on the unit-of-production method based on total estimated recoverable reserves of the properties to which it relates.

The consideration given for the shares acquired was 222,222 unissued common shares of Francana valued at \$1,925,825 and \$73,020,842 in cash. The cash requirement was financed as follows:

Issue of capital stock of Francana Oil & Gas Ltd:	
To the Company	\$14,595,948
To minority interest	8,742,108
	23,338,056
Issue of convertible debenture to associated company, considered to be minority interest	
	45,909,337
Interest-free loan from associated company	3,925,200
	\$73,172,593

The convertible debenture issued to an associated company is interest-free and is due on May 22, 1979. It may be converted before June 30, 1975, into shares of Trend International, or alternatively, before May 22, 1979, the debenture may be exchanged for shares of Trend Exploration pledged as security for the debenture. By either of these conversion privileges, the associated company would have a direct or indirect 43.15% interest in Trend Exploration. It is the opinion of management that one of these privileges will be exercised and, therefore, the debenture of \$45,909,337 has been treated as minority interest in the accounts, rather than long-term debt.

The acquisition has been accounted for by the purchase method and the accounts of Trend Exploration have been consolidated with those of the Company for the period from July 1, 1974, to December 31, 1974. During 1973 and until June 30, 1974, the investment was accounted for by the equity method.

## 12. Foreign operations

### Indonesia

A subsidiary of the Company is the operator for, and has a significant interest in, a joint venture involved in petroleum exploration, development and production in Indonesia. The crude oil production is shared under the terms of a production-sharing contract between the subsidiary and Pertamina (the national oil company of Indonesia). The Company's investment in the In-

donesian operation at December 31, 1974, was approximately \$72,000,000 and is included in property, plant and equipment. In the opinion of management, reserves discovered to date are sufficient to enable the Company to recover its investment from future production.

Indonesian income taxes are determined under contract with the government and generally allow for deduction of all costs incurred, although certain of these costs are capitalized and amortized for financial reporting purposes. Deferred Indonesian income taxes are not appropriate relative to these timing differences since additional future taxes will be met by increased allocations under the production-sharing contract.

### Mexico

During 1974, the Company, through its recent investment in Lytton Minerals Limited, acquired an interest in certain mining properties under development in Mexico. The Company has undertaken to invest approximately \$5,000,000 in 1975 as its share of a proposed plan to develop these properties.

### 13. Contingencies

During 1973, an action was brought alleging infringement by the Company with respect to certain patents relating to the processing of potash. In the opinion of the Company and its counsel the patents are not infringed and, accordingly, the Company has a good defense to the action on the merits.

At December 31, 1973, certain mines which came into production in the years 1970-1973 were considered to be tax exempt in calculating income tax expenses but had not received tax-exempt status from the Department of National Revenue. All significant exemption certificates were received in 1974.

### 14. Subsequent event

On March 5, 1975, the Company agreed in principle to acquire 7% cumulative preferred shares with a par value of U.S.\$6,000,000 and a further equity interest of approximately 20% in an associated company, Terra Chemicals International, Inc., for U.S.\$14,620,886 cash and a U.S.\$6,000,000 9% note repayable in five equal annual instalments beginning one year after the proposed closing date for the acquisition of July 3, 1975.

This transaction, which is subject to the completion of a definitive agreement, will result in the Company

acquiring control of the majority of the issued common shares of Terra Chemicals International, Inc.

## 15. Restatement of 1973 financial statements

At the Company's Annual and Special General Meeting on April 26, 1974, the shareholders approved the acquisition, effective August 21, 1973, of a 37.8% equity interest, plus a \$5,000,000 7% debenture due September 30, 1985 (convertible into common shares until October 1, 1978, at the rate of 200 shares for each \$1,000 of principal) in Western Decalta Petroleum Limited for 900,000 shares issued as fully paid and valued at \$22,500,000, and \$7,500,000 in cash paid as a deposit in 1973. An amount of \$1,170,000 (representing 1973 dividends relative to the 900,000 shares) was held in escrow and included in deferred charges.

The approval of the above transaction on a retroactive basis has resulted in the following restatements of the 1973 financial statements.

- (a) Investments in other companies increased by \$30,000,000 with a corresponding increase of \$22,500,000 in the capital stock account and the application of the \$7,500,000 deposit.
- (b) Equity in earnings of associated companies and net earnings for the year increased by \$5,000 (the Company's share of earnings since date of acquisition in 1973 less amortization of the excess of cost of the investment over the underlying equity) with a corresponding increase in investments in other companies.
- (c) Earnings per share before, and after extraordinary item became \$4.77 and \$5.06 per share, compared with \$4.93 and \$5.23 per share, respectively, before restatement.
- (d) Dividends increased by \$1,170,000 representing the amount previously held in escrow; retained earnings at December 31, 1973, as previously reported, decreased by \$1,165,000 resulting from this dividend less the \$5,000 increase in earnings referred to above.

## 16. Reclassification of prior year's figures

In the accompanying financial statements, materials and supplies are classified as other assets whereas in prior years they were classified as current assets and included in working capital. As a result of this reclassification, working capital as at December 31, 1973, has been decreased by \$6,393,039 and the 1973 increase in working capital reduced by \$83,777.

Certain other 1973 figures have been reclassified to conform to the presentation of the 1974 financial statements.

#### 17. Extraordinary item

The Wellgreen Mine in the Yukon which came into production in May, 1972, was shut down permanently on July 6, 1973. Higher-than-anticipated revenues resulted in the recovery of a portion of the loss.

#### 18. Remuneration of directors and officers

The Company has 12 directors and 17 officers (12 officers in 1973); two of the officers are also directors. The aggregate remuneration paid to the directors and officers, as such, was as follows:

	1974	1973
Directors	\$ 54,950	\$ 53,600
Officers	\$895,067	\$686,920

#### Dividends and market price ranges, by quarters

1974	Dividends(1)	Market range				New York Stock Exchange (U.S.\$)			
		Toronto Stock Exchange(2) (Principal market, Cdn \$)				High		Low	
		A	B	A	B	A	B	A	B
1st	40¢	—	27 $\frac{3}{8}$	—	24 $\frac{1}{4}$	—	29 $\frac{1}{4}$	—	24 $\frac{3}{4}$
2nd	40¢	40¢	25 $\frac{1}{4}$	20 $\frac{5}{8}$	18 $\frac{1}{2}$	20 $\frac{3}{8}$	26	—	19 $\frac{3}{8}$
3rd	40¢	40¢	21	20	13 $\frac{7}{8}$	14 $\frac{7}{8}$	21 $\frac{1}{2}$	20 $\frac{3}{4}$	13 $\frac{3}{4}$
4th	40¢	40¢	17 $\frac{3}{4}$	16 $\frac{1}{4}$	12 $\frac{1}{4}$	12 $\frac{3}{4}$	18 $\frac{1}{8}$	17 $\frac{1}{4}$	12 $\frac{1}{2}$
<b>1973</b>									
1st	30¢	—	24 $\frac{1}{2}$	—	20 $\frac{1}{4}$	—	24 $\frac{3}{4}$	—	20 $\frac{5}{8}$
2nd	40¢	—	24 $\frac{7}{8}$	—	19 $\frac{3}{4}$	—	25 $\frac{3}{4}$	—	21 $\frac{1}{8}$
3rd	40¢	—	29 $\frac{1}{4}$	—	24 $\frac{5}{8}$	—	32 $\frac{7}{8}$	—	25 $\frac{1}{2}$
4th	90¢	—	31 $\frac{7}{8}$	—	22 $\frac{1}{2}$	—	31 $\frac{3}{4}$	—	25

(1) The Company's common shares were reclassified as Class "A" and Class "B" convertible common shares and commenced trading on three stock exchanges on May 27, 1974.

(2) The Company's shares are traded on the Montreal, New York and Toronto Stock Exchanges.

#### Financial review and Management's discussion and analysis of the consolidated statement of earnings

**Net earnings for 1974** amounted to \$38,578,917, or \$3.88 per share, the second highest on record, compared with restated 1973 earnings of \$47,293,830, or \$5.06 per share. The 1973 earnings reflect extraordinary income from a partial recovery of the loss on the Wellgreen Mine of \$2,704,000, or 29¢ per share.

**Dividends declared for 1974** totalled \$15,906,653, equal to \$1.60 per share, compared with \$19,252,866, or \$2 per share, for 1973. The dividend declaration for 1973 included a year-end extra of 50¢ per share; there was no year-end extra in 1974.

**Working capital** decreased from \$53,973,399 at the end of 1973 to \$21,010,195 at year-end 1974, due to the large capital and investment expenditures made during 1974.

**Capital expenditures** during 1974 totalled \$43,638,732,

an increase of \$25,462,078 over 1973. Approximately \$22,400,000 of this total was spent in the Flin Flon-Snow Lake area, principally on the modernization and environmental programs being implemented in the Flin Flon metallurgical complex, and on underground mine development. A total of \$13,000,000 was spent by Francana Oil & Gas Ltd. and its subsidiary, Trend Exploration Limited, while expenditures to complete the new zinc oxide plant in Brampton, Ontario, amounted to \$3,300,000.

**The major investment in 1974** was made by Francana on May 21, 1974, when it increased its interest in Trend Exploration from 30% to 57% through a subsidiary, Trend International Limited. The total cost of the Trend Exploration acquisition was \$74,946,667, of which \$14,595,948 was invested directly by your Company through a rights offering of Francana. A total of 1,216,329 shares of Francana was acquired at \$12 each, resulting in the Company having a 55% interest in Francana at year-end. Complete details of the Trend Exploration acquisition are set forth in Note 11 to the Consolidated Financial Statements.

**The other significant investments** during 1974 were in Lytton Minerals Limited, Canadian Merrill Ltd. and Whitehorse Copper Mines Ltd. The investment in Lytton, through which the Company's interest in the La Verde copper deposit in Mexico is held, represents an 33.6% interest costing \$4,443,680. Full details of this investment are included in the Report of the Directors. The investment in Canadian Merrill during the year, amounting to \$6,161,799, represents a 23% interest in that company, together with a \$4,000,000, 6 $\frac{1}{2}$ % convertible debenture which, if converted, represents an additional 20% interest. Similarly, the Company's interest in Whitehorse Copper was increased from 5% to 21% at a cost of \$1,822,619.

At the Company's Annual and Special General Meeting held on April 26, 1974, shareholders approved purchase of a 37.8% interest in, plus a \$5,000,000, 7% convertible debenture of, Western Decalta Petroleum Limited, at a combined cost of \$30,000,000. The transaction was retroactive effect to August 21, 1973, and the 1973 financial results have been restated to reflect this transaction.

**Supplementary financial information**

	1974	1973	1972	1971	1970
<b>Summary of operations</b>					
Net sales	\$202,327	\$166,865	\$ 96,331	\$ 54,018	\$ 78,125
Equity earnings	9,129	1,566	—	—	—
Other income	5,529	5,360	2,784	2,148	3,357
	216,985	173,791	99,115	56,166	81,482
Costs and expenses	143,064	110,624	84,512	52,779	52,410
Taxes and royalties	30,499	16,175	2,954	(846)	8,279
Other deductions	4,843	2,402	270	1,224	1,230
	178,406	129,201	87,736	53,157	61,919
Earnings before extraordinary items	38,579	44,590	11,379	3,009	19,563
Wellgreen Mine (loss) recovery	—	2,704	(8,518)	—	—
Net earnings	\$ 38,579	\$ 47,294	\$ 2,861	\$ 3,009	\$ 19,563

**Other financial data**

	All figures in \$000's				
Capital expenditures	\$ 43,639	\$ 18,177	\$ 12,282	\$ 21,978	\$ 34,660
Investment expenditures	86,940	41,137	3,160	1,609	358
Working capital	21,010	53,973	41,512	34,418	25,455
Total assets	403,973	310,187	216,431	215,657	191,478
Capital employed	344,918	253,231	194,260	202,803	178,716
Shareholders' investment	217,297	194,620	144,079	148,440	149,951
Dividends	15,907	19,253	7,233	4,520	10,698
Earnings per share	3.88	5.06	0.32	0.33	2.16
Dividends per share	1.60	2.00	0.80	0.50	1.18 1/3*

\*Reflects 3-for-1 share split in 1970.

**Lines of business information**

	All figures in \$000's				
<b>Net sales:</b>					
Base metals	\$144,564	\$136,921	\$ 79,610	\$ 39,618	\$ 72,441
Potash	31,299	20,132	9,760	7,589	—
Oil and gas	18,423	4,006	3,385	2,821	2,556
Other	8,041	5,806	3,576	3,990	3,128
	202,327	166,865	96,331	54,018	78,125
<b>Earnings before taxes and minority interest:</b>					
Base metals	\$ 32,238	\$ 49,168	\$ 13,350	\$ (850)	\$ 26,965
Potash	16,562	6,343	330	1,172	—
Oil and gas	14,252	1,955	1,245	1,386	1,552
Other	10,329	3,845	(321)	867	(11)
	73,381	61,310	14,604	2,575	28,506

**Net sales increased** by \$35,462,224 in 1974 and by \$70,340,965 in 1973 due to improved metal and potash prices, although copper prices declined in the last half of 1974. Consolidation of Trend Exploration revenue from July 1, 1974, effected the 1974 increase.

**Production costs increased** by \$26,000,849 and by \$25,211,972 in 1974 and 1973, respectively. Increased concentrate purchases accounted for \$14,700,000 and \$23,550,000 of these increases. The remainder of the 1974 increase represents substantial increases in labor and material costs.

The increase in depreciation and depletion costs in 1974 was due primarily to the inclusion of Trend Exploration costs.

The increase in exploration expenses in 1974 represents an increase in the total exploration program for that year.

Increased general administration expenses in both 1974 and 1973 were due primarily to increased staff and related costs at Head Office and generally increased salary costs.

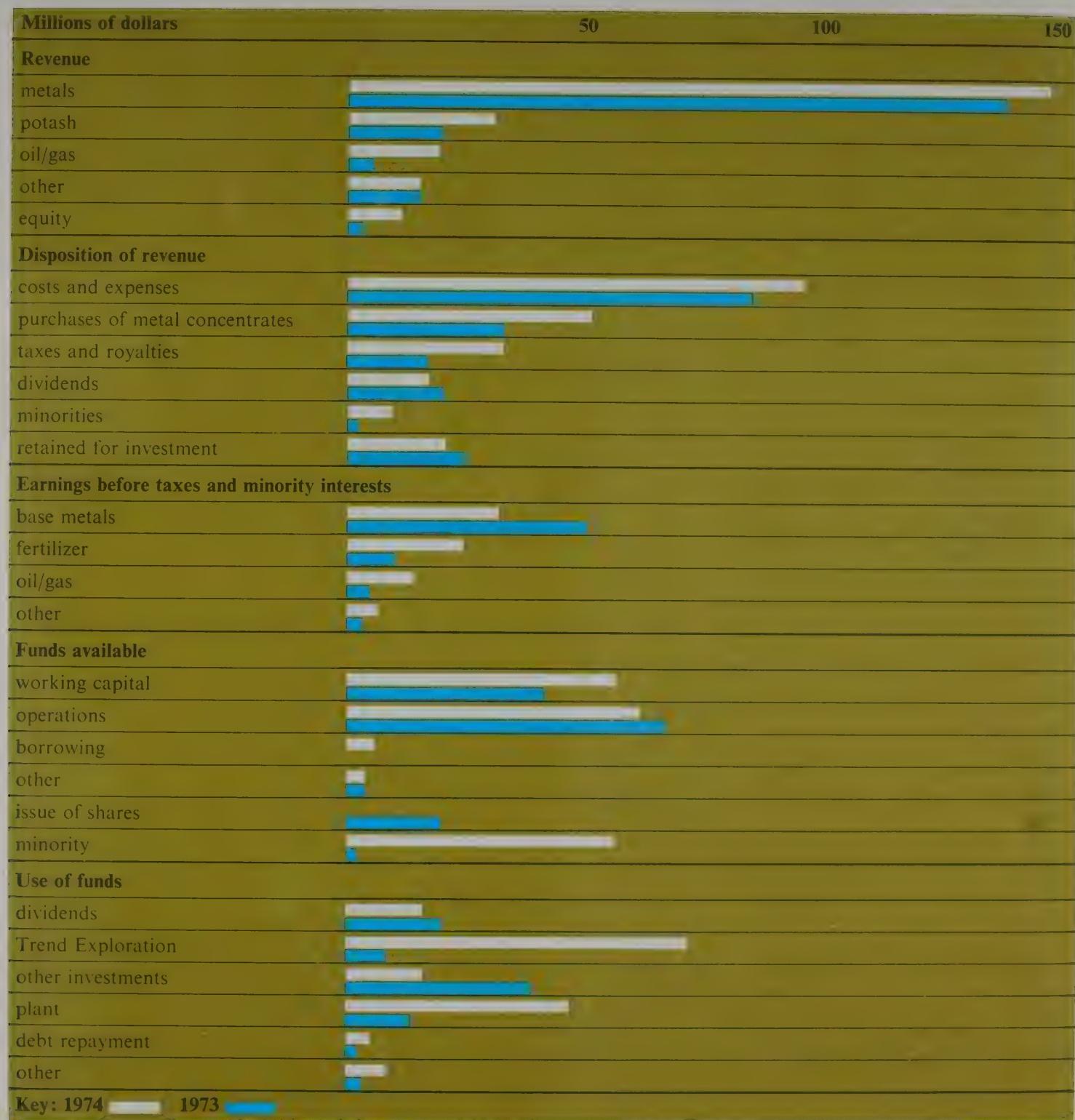
**Equity in earnings of associated companies**, an accounting practice commenced in 1973, includes the Company's equity in earnings of Terra Chemicals International, Inc., Trend Exploration and Western Decalta in 1973. Equity earnings for 1974 include, in addition to these companies, earnings of Canadian Merrill and Whitehorse Copper Mines.

Other income increased from \$2,783,835 in 1972 to \$5,359,937 in 1973. The increase of \$2,576,102 was due primarily to the first year's income from the Whitehorse Copper joint venture and increased interest income.

**Increased income taxes, mining taxes and royalties** — \$2,499,566 in 1972 to \$16,174,888 in 1973 were a direct result of increased earnings. However, the increase in 1974 taxes of \$14,323,913 was due primarily to three causes, the most significant being the termination of the three-year tax-exempt period for new mines. In addition, during 1974 the provincial governments in the areas of our base metal and potash operations substantially increased royalty and other resources taxes. The full effect of these increases will not be felt until 1975. The consolidation of Trend Exploration results for the last half of 1974 added to the increase in taxes by \$4,775,575.

## Comparative financial analysis

	1974	1973
Millions of dollars		
Revenue	217	176
Earnings before taxes and minority interests	73	61
Funds available	177	134
Use of funds	156	80



## Review of Operations

# metals

**Prices and markets.** At the beginning of the year the Canadian price for copper was 74¢ per lb. By early June, it had risen to 82.5¢, the high for the year. Price reductions in September, October and November lowered the price to 73¢ where it remained until year-end despite heavy downward pressure from falling prices on the London Metal Exchange, which determines prices for overseas sales. By year-end, the LME price for copper had dropped to 55.83¢ (Cdn.) per lb. from a record \$1.48 in April. The price in January, 1974, was 89.85¢.

Overseas sales accounted for 65% (58% in 1973) of the Company's copper sales; Canadian sales accounted for 35% (35%). The Company did not sell copper in the U.S. in 1974; in the previous year, the U.S. market accounted for 7% of sales.

**Zinc prices in Canada** increased from 31¢ per lb. at the beginning of the year to 37¢ at year-end. The U.S. price was 2¢ higher than the Canadian price, with duty for the buyer's account. Overseas, the European producer price arose from 31.24¢ per lb. in January to 38¢ at year-end.

The distribution of the Company's zinc sales was as follows (1973 percentages in brackets): Canada—54%(48%); U.S.—35%(37%); overseas—11%(15%).

**Gold and silver prices** increased during the year. Gold rose from \$114.75 (U.S.) per oz. in January to \$187.50 at year-end; Silver, from \$3.35 (U.S.) per oz. at the beginning of the year to \$4.37 on December 31.

**Exploration.** Diamond-drilling in the Snow Lake area of northern Manitoba to test a structural interpretation of the Lost Lake area, near Ghost Lake Mine, has outlined two small lenses of copper-zinc-lead mineralization containing a total of 247,300 tons. One of these lenses contains 92,600 tons of ore and will be developed and mined from the Ghost Lake decline. The grade of this new ore lens is gold, 0.085 ozs. per ton; silver, 2.37 ozs. per ton; copper, 1.45%; zinc, 4.9%, and lead, 1%.



A new \$3 million copper anode-casting facility

**At the Reed Lake zone**, also near Snow Lake, additional diamond-drilling has shown that mineralization extends to depth of 1,800 feet below surface. This mineralized zone is estimated to contain 1,500,000 tons of 2.09% copper (diluted 10%) but is considered to be uneconomic under present conditions.

**Hudson Bay Exploration and Development Company Limited** explored for its own account in Manitoba and Saskatchewan and jointly with Amcan in British Columbia, the Yukon, the Northwest Territories, Ontario, Quebec, and in the southwestern U.S. A total of 183,705 feet was drilled to test 363 geophysical anomalies and to explore mineralized zones. In the Yukon, exploration carried out jointly with Amcan located a number of mineral occurrences that warrant further exploration during 1975.

**Reserves.** Proven reserves of copper-zinc ore in the Company's mines in the Flin Flon-Snow Lake area at year-end totalled 17,973,800 tons, assaying gold, 0.033 oz per ton; silver, 0.50 oz per ton; copper, 2.89%; zinc 2.7%. Ore reserves at year-end 1973 totalled 18,000,600 tons.

A total of 1,570,762 tons was mined during 1974; the tonnage added to reserves was 1,543,962, resulting in a net loss of 26,800 tons.

Prior to the calculation of ore reserves for this report, a thorough review was made of production experience in the Company's mines where several different mining methods are used. As a result, the calculation includes average waste dilution of 15% and average estimated recovery of 90% of the diluted tonnage. Since the dilution factor used previously was slightly less than 10%, the grade of reserves now reported has been correspondingly reduced.

**The proposed 1975 budget** controlled by Hudson Bay Exploration is estimated to be \$5 million. This figure includes approximately \$1.7 million to be contributed by Amcan and Tombill Mines Limited under a joint-venture agreement, and a portion of the proposed expenditures that will be assumed by the Government of Manitoba.

**The Government of Manitoba** has entered the mineral exploration field in Manitoba via the Disposition

Regulations, 1974. This regulation sets out three methods of mineral-disposition tenure in the province: permits; claims and claim blocks; and production and explored area leases.

The holder of a mineral disposition, other than production and explored area leases, is required to submit annually to the Department of Mines a detailed description of any proposed program on each mineral disposition if the estimated cost is more than \$10,000. Indications are that the Minister of Mines will enter into agreements covering these programs and will take a 50% participation for the Crown. The provincial government will pay for its share of each program.

This proposed participation by the Government of Manitoba enables it to benefit at no cost from the considerable experience and information acquired by the Company over many years. As a result of this development, plus certain mining taxation changes, the Company has reduced its exploration budget in Manitoba and Saskatchewan by 50%—from \$3 million to \$1.5 million—and has diverted these funds for exploration elsewhere.

**As a result of the amendments in Bill 31** concerning the B.C. Mining Royalties Act, it was decided early in 1974 to discontinue further exploration and development work on Stikine Copper Limited's property in northwestern British Columbia. The 1974 budget was approximately \$1 million. Diamond-drilling equipment was removed from the property and the camp was shut down for an indefinite period.

An outside consultant's technical and economic study confirmed the Company's earlier conclusion: although the tonnage and grade are impressive for a porphyry-type copper deposit, the viability of the project will depend to a great extent on solving the problems of establishing a suitable infrastructure.

Under the terms of a five-year agreement with Kennecott Copper Corporation and Cominco, the Company increased its interest from 19% to 31.7% by taking down Stikine treasury shares in return for about \$2.5 million spent on the property during the past three years. Kennecott's interest was correspondingly reduced and Cominco's interest remained at 5%. Although no further work on the property is planned, the claims will be kept in good standing.



Diamond-drilling in Northern Manitoba



Diamond-drilling in the Canadian Rockies

A Douglas DC-3 aircraft was purchased in January by Minsearch Surveys Limited, in which the Company has an interest (see section on Acquisitions), and was outfitted with prototype Airtrace equipment by June.

Airtrace is an airborne survey system in which biogeochemical particulate material in the atmosphere is collected and analyzed. The resulting information is used in detecting both metalliferous and hydrocarbon deposits. Test flights were carried out over two areas containing known metalliferous deposits near Flin Flon in July. Results were sufficiently encouraging to warrant further research and development.

During the rest of the year an intensive investigation of the phenomena governing the operation of the system was carried out in the air, on the ground, and in the laboratory and resulted in many improvements being made to the equipment. At present, emphasis is on modifications aimed at completely automating the collection and analysis components. The system probably will become operational during 1975.

The Zero Gradient Fixed Wing airborne electromagnetic survey system designed by Vaino Ronka and constructed by Geonics Ltd. was placed on an operational basis during 1974. Surveys using this system were completed in Manitoba and Ontario and the results were satisfactory. Experimental work to upgrade the system to dual-frequency operation, thereby enabling better penetration of conductive overburden, is being continued.

**Hudson Bay Air Transport Limited**, a wholly owned subsidiary of Hudson Bay Exploration, logged 243,335 miles during 2,094 flying hours this year, largely in support of explorational programs.

**Flin Flon operations.** Production of metals was as follows: refined copper, 104,440,483 lbs.; slab zinc, 155,991,878 lbs.; cadmium, 298,736 lbs.; selenium, 108,198 lbs.; gold, 50,342 ozs.; and silver, 1,065,438 ozs.; 72 tons of lead concentrate containing 15 ozs. of gold, 1,997 ozs. of silver, and 94,900 lbs. of lead.

**Producing mines.** Eight of the nine mines operated by the Company in the Flin Flon-Snow Lake area were in production continuously; production at the Osborne Lake Mine was interrupted by considerable development work carried out in the deeper zones.

Ore production totalled 1,570,762 tons, 240,038 tons less than the tonnage mined in 1973 because of a chronic shortage of trained miners and labor in northern Manitoba.

Details of this production, with average assays, are as follows:

mine	tons	average assays				
		Au oz./ton	Ag oz./ton	Cu %	Zn %	Pb %
Flin Flon	551,500	0.04	0.7	1.9	2.1	—
Anderson Lake	200,300	0.01	0.2	2.9	0.3	—
Chisel Lake	169,800	0.05	1.0	1.0	10.1	0.5
Osborne Lake	131,700	0.01	0.2	2.8	1.6	—
Dickstone	132,000	0.02	0.3	2.7	2.0	—
Schist Lake	68,200	0.03	0.9	3.7	4.5	—
Stall Lake	143,100	0.05	0.3	3.9	0.9	—
White Lake	103,500	0.02	1.0	2.2	4.5	—
Ghost Lake	68,700	0.05	1.7	2.0	11.5	0.4
Centennial*	2,000	0.08	0.8	2.2	1.8	—

\*under development

Remnants and pillars continued to be the main sources of ore in the Flin Flon Mine.

Schist Lake Mine produced less than expected because of difficult conditions in stopes and remnants being mined on a cleanup basis preparatory to a permanent shutdown in approximately one year's time.

Production at the White Lake Mine was slightly lower than in the previous year. Exploration by diamond-drilling below the present bottom level outlined 176,600 tons of new ore.

At the Dickstone Mine the further exploration below the 1,150-foot level increased the ore reserves by 45,300 tons.

Production at the Ghost Lake Mine was lower than expected as the ore was mined in difficult stopes.

Tonnage produced at the Chisel Lake Mine was lower than anticipated but the grade improved slightly. Some work was done on possible methods for mining the large block of ore below the lake. No further work will be done until 1976 since the mine's ore reserves are such that there is ample time to do this work.

Stall Lake Mine's production was well below the expected tonnage. Diamond-drilling and development work below the 2,850-foot level added 368,900 tons of new ore.

Mine-development work was carried on simultaneously with production at the Osborne Lake Mine and 217,200 tons were added to the reserves in the ore zone below the 2,100-foot level.

At the Anderson Lake Mine practically all the ore was mined by the cut-and-fill method, with a marked reduction in dilution. Diamond-drilling outlined 183,200 tons of additional ore below the 2,650-foot level.

**Mines under development.** At the Centennial Mine the access decline to the orebody below Lake Athapaskow was completed. All services for the mine were installed underground, including a 2,000-foot conveyor to move the broken rock from the ore bin to surface. Shaft-sinking was begun on January 8, 1975.

A road and transmission line were completed to the site of the Westarm Mine. At year-end, the headframe and all auxiliary buildings were erected, but not equipped. Shaft-sinking was expected to begin on April 1, 1975.

The concentrator treated 1,574,948 tons of ore, representing 6,275 tons per operating day.

	1974	1973
tons of ore treated	1,574,948	1,815,027
average tons per calendar day	4,315	4,973
Au—oz./ton	.04	.04
Ag—oz./ton	.6	.7
Cu—%	2.3	2.4
Zn—%	3.2	3.6
Pb—%	.1	.3

The following concentrates were produced from the ore treated:

concentrates	tons	assays					
		Au oz./ton	Ag oz./ton	Cu %	Zn %	S %	Fe %
copper	215,076	.15	3.0	16.0	3.6	.3	
zinc	69,550	.08	1.3	.7	48.5	.9	
lead	72	.21	27.7	.3	1.9	65.9	

The total tonnage and approximate assays of the tailings stockpile to date are as follows:

tons	assays						
	Au oz./ton	Ag oz./ton	Cu %	Zn %	S %	Fe %	
54,643,233	.02	.3	.2	.7	23.1	26.0	



Flin Flon Mine and part of the City of Flin Flon



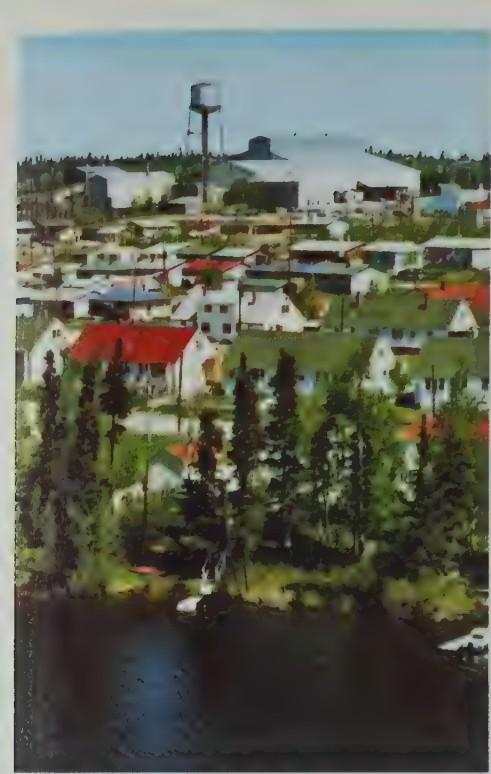
Schist Lake Mine



Centennial Mine



White Lake Mine



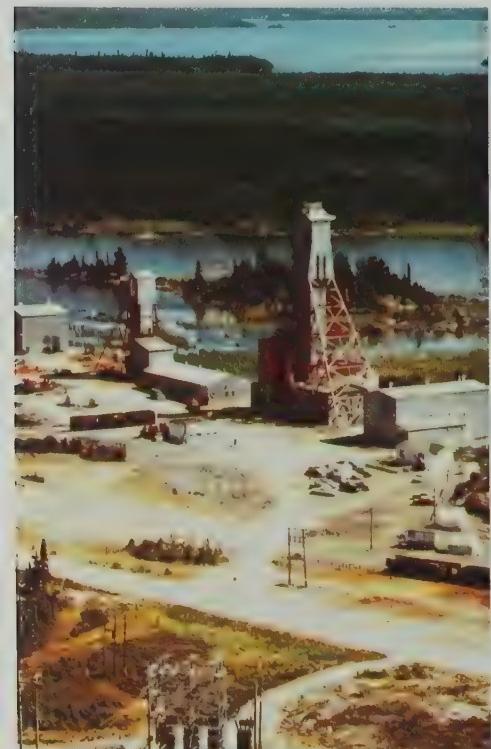
Town of Snow Lake



Chisel Lake Mine



Anderson Lake Mine



Stall Lake Mine



Dickstone Lake



Osborne Lake Mine

**Zinc refinery.** A total of 155,991,878 lbs. of zinc was produced. The Special High Grade brand produced was 99.9978% pure zinc. Production was reduced due to lack of oxides and to the cutback that was necessary so that the roasters could be connected to the new 825-foot stack.

During the periods of low production, circuits were removed in rotation and extensive feeder busbar maintenance was carried out.

The new building for receiving and blending concentrates was placed in service to facilitate the production of a more uniform roaster feed.

Cadmium production was 298,736 lbs., or 818 lbs. per calendar day, compared with 843 lbs. per day in 1973. Cadmium input to the plant was lower due to decreased quantities of oxide and to the increased consumption of low cadmium-bearing custom concentrates.

The following materials were treated:

	assays				
	tons	Au oz./ton	Ag oz./ton	Cu %	Zn %
HBM&S concentrates	70,438	.077	1.34	.70	48.5
purchased concentrates	81,174	—	—	.84	51.7
oxide	35,540	.014	.78	1.20	60.0

This is the first year that the concentrates treated contained more custom material than local material.

Production of sulphide residue totalled 59,123 tons, of which 53,317 tons were delivered to the smelter. The remainder was stockpiled. Oxide residue produced totalled 10,883 tons, of which 10,204 tons were stockpiled; 679 tons were sent to the copper thickener.

**Copper smelter.** The tonnage and assays of the materials which were treated in the smelter are as shown below:

	assays				
	tons	Au oz./ton	Ag oz./ton	Cu %	Zn %
HBM&S concentrates	212,667	0.154	3.016	16.024	3.630
residues, etc.	58,612	0.106	2.570	3.187	26.870
purchased concentrates	92,894	0.176	4.174	24.152	3.558

The tonnage and metal content of blister and anode

copper produced for the Company's account for shipment to the refinery were as follows:

	tons	Au-oz.	Ag-oz.	Cu-lbs.	Se-lbs.
Hudson Bay feed purchased	32,371	35,672	680,105	64,317,724	108,198
concentrates	22,407	16,152	416,526	44,518,743	—
total	54,778	51,824	1,096,631	108,836,467	108,198

Slag treated in the fuming furnaces totalled 301,030 tons, yielding 25,789 tons of oxide. This oxide, containing 37,421,386 lbs. of zinc, was delivered to the zinc refinery for processing into slab zinc.

Operations were interrupted twice during the year to complete major reverberatory furnace work and to connect the new flue system with the new stack. The two shutdowns accounted for 16 days of lost operation.

The anode-casting plant began operating in March, phasing out blister-casting completely by April.

**Research personnel** participated in the training of operating personnel during the conversion to copper anode-casting. Operating data before and after the startup of the new flue system, cottrells and stack was accumulated.

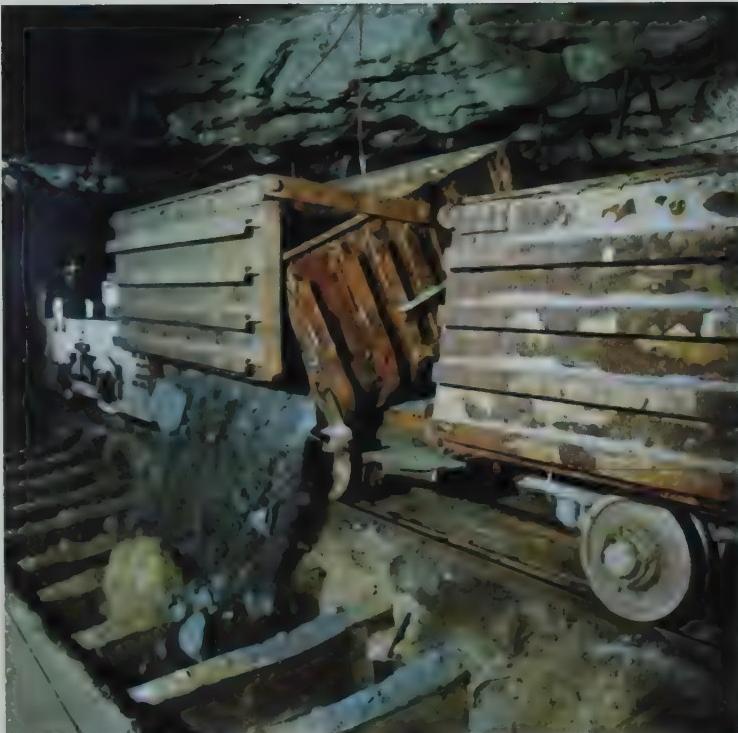
Beneficiation studies were conducted on Centennial, talc, and Dickstone stockpile ores with ore-dressing procedures recommended for each. Flotation tests on converter slag were conducted as a possible means of increasing the reverberatory capacity.

Studies were conducted on reverse leaching of zinc calcine, impurity control in zinc dust and beta naphthol purification of zinc electrolyte, along with an alternate filtration method of primary purification filtrate that will be in the pilot stage in 1975.

The use of atomic absorption analysis has been increased in the fields of control and custom-concentrate analysis.

**Environmental control.** Through the projects undertaken by the Environmental Control Department, the Company worked toward achieving an acceptable balance between the needs of the Company and various government regulations.

The new stack handles waste gases from the zinc and copper-processing facilities and the results represent





a significant and major step toward solving air-quality problems in the Flin Flon area. Monitoring indicates that the resultant ambient air quality is much better than the conditions stipulated by the federal and provincial governments. Improved dust-collecting equipment contributed to this improvement.

Continued progress was made to upgrade the purity of streams containing plant effluent. Certain engineering and reconstruction projects, and long-range planning for the mill tailings storage area will result in further improvement of water quality.

In keeping with established policy, a high level of co-operation was maintained with the federal and provincial agencies involved in environmental control. The general public and the communities in the Flin Flon area were kept informed of the Company's desires, projects and results in trying to achieve the best possible environmental conditions in the Company's operating area.

**Power supply.** Churchill River Power Company Limited, a wholly owned subsidiary, and the Company's thermal plant at Flin Flon generated 657,322,600 kilowatt hours, a decrease of 66,471,500 kilowatt hours from the 1973 total.

Precipitation in the watershed area was sufficient to maintain the elevation of Reindeer Lake for the winter draw-down period.

Considerable additions and revisions to the electrical distribution systems of the Flin Flon plant were required to provide power facilities for the various plant projects undertaken in 1974.

A 12-mile transmission line was constructed from the Flin Flon substation to Westarm Mine.

**Major projects.** A number of major projects started in 1973 were completed and the status of the projects is as follows:

1. Anode casting: in operation since early 1974 with minor operational difficulties.
2. Reverberatory boilers: the first of two new waste-heat boilers became operational in November and is performing satisfactorily; the second one is scheduled for completion in May, 1975, together with installation of a 15-MW turbine and diesel standby generator.

3. New stack: the stack was completed and connected to the flue system in November; performance is in line with expected results.

4. Main flue system: the new copper cottrells and new flues for all off-gases were effectively completed and connected to the new stack in November.

**Industrial Relations.** Personnel training programs implemented were well received; the use of Company-sponsored programs toward self-development increased. The Training and Development Centre's contribution is becoming increasingly evident.

Labor was generally in very short supply due to abnormal turnover, with the production and operating departments experiencing continual shortages. The Company's labor policy was broadened to include women in laborer and operating-plant classifications and recruiting campaigns were extended beyond the Prairie Provinces to Quebec and the Maritimes; one campaign was held in England. At year-end the workforce totalled 2,489 employees, compared with 2,442 a year earlier.

During the year the Company increased wages by awarding two special allowances to offset the increased effects of inflation. The first, in April, was an allowance of up to \$32 per month for hourly rated employees with a 4% increase (minimum \$32) to salaried personnel. The second, effective November 18, granted hourly rated personnel a basic 8% increase across the board plus a 1½¢ cumulative incremental increase, starting with the second of 17 steps on the hourly wage scale. The 8% increase included 10¢ of the contractual increase due on October 1, 1975. Equivalent increases were given to salaried personnel.

The preparatory work for a job-evaluation program to be introduced in 1975 was completed.

Efforts to improve internal communications were continued and an Employee's Newsletter was started in July.

To date, 1,344 employees, past and present, have completed 25 years of service, 84 having qualified in 1974. At year-end, 602 employees with 25 years or more of service were on the payroll.

**Whitehorse Copper Mines Ltd.** Production from the

#### Ten-year record 1965-1974

Production					
	copper (tons)	zinc (tons)	cadmium (lbs.)	gold (ozs.)	silver (ozs.)
1965	39,726	71,435	368,208	82,189	1,216,359
1966	38,268	73,331	352,405	71,202	1,022,009
1967	38,403	72,061	352,042	70,615	1,040,098
1968	41,660	80,308	330,872	59,602	970,674
1969	42,302	79,711	333,959	52,410	818,209
1970	42,178	78,622	338,343	55,188	865,141
1971	26,988	41,158	145,857	27,635	504,021
1972	54,076	77,023	386,768	51,990	1,014,041
1973	59,632	82,882	306,570	62,892	1,293,059
1974	52,220	77,996	298,736	50,342	1,065,438

#### Ore milled and ore reserves

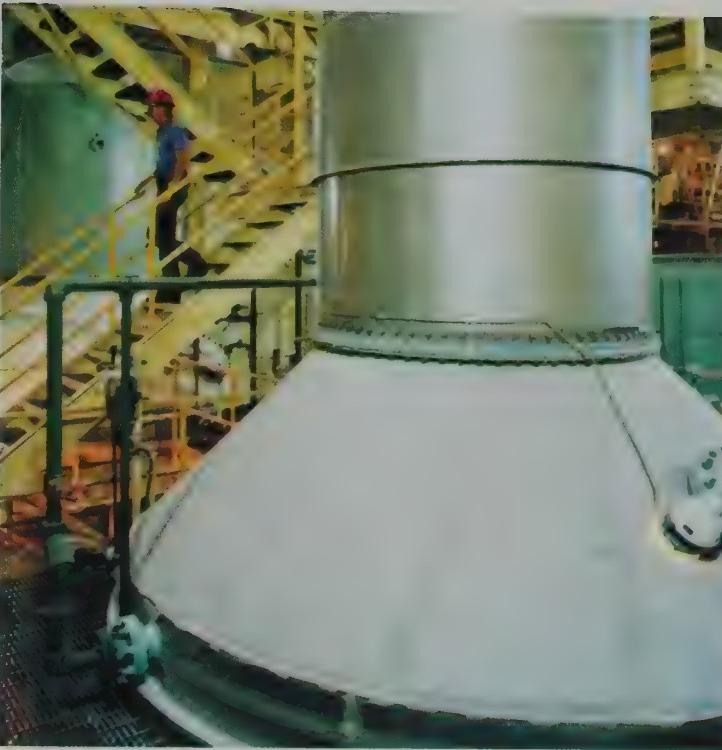
	milled (tons)	reserves (tons)	copper (%)	zinc (%)	gold (oz./ton)	silver (oz./ton)
1965	1,640,000	16,842,000	3.0	4.5	0.05	0.8
1966	1,690,000	16,765,300	2.9	4.4	0.04	0.7
1967	1,588,000	16,884,600	3.0	4.1	0.04	0.7
1968	1,610,000	17,612,300	3.0	3.8	0.04	0.6
1969	1,702,000	18,048,600	3.0	3.5	0.04	0.6
1970	1,709,000	19,115,100	2.9	3.3	0.04	0.6
1971	1,084,000	18,344,900	2.9	3.3	0.04	0.6
1972	1,847,900	17,283,600	2.9	3.3	0.04	0.6
1973	1,815,027	18,000,600	3.1	2.9	0.03	0.5
1974	1,574,948	17,973,800	2.9	2.7	0.03	0.5

joint venture with Whitehorse Copper Mines, in the Yukon, in which the Company has a 16⅔% interest, was at a rate of approximately 1,716 tons per day grading 1.84% copper and totalled 618,000 tons for the year. Concentrate production totalled 27,848 tons with an average grade of 37% copper. Most of the concentrate was shipped to Noranda, Que., for smelting with the remainder shipped to the Company

smelter in Flin Flon. Underground drilling during the year increased the ore reserves sufficiently to offset the tonnage mined during the year. Drilling is to continue during 1975. Total production fell short of budget, due primarily to oversize rock, but the underground crusher being installed should increase production during 1975. Development work continued in preparation for mining below the 1,750-foot level.



Potash ore entering initial refining stage



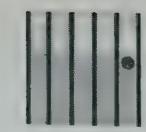
Crystallizers in the refinery



Slimes separation building



Potash in storage on surface



# fertilizers chemicals

**Sylvite of Canada**, the Company's potash division, produced 1,093,449 tons of potash—91% of its rated capacity of 1.2 million tons annually—as the strong demand that began in the fall of 1973 grew to such proportions early in 1974 that the Government of Saskatchewan suspended prorationing on June 30. The 1974 production rate at Sylvite compares with 73% in 1973 and 42% in 1972.

**Potash markets and prices.** Sales in 1974 totalled 1,076,355 tons, compared with 961,162 tons in 1973. The higher volume exerted upward pressure on prices, depleted warehouse inventories in the field, made it next to impossible to stockpile product at the mine-site and forced Sylvite to change its mining plan and to increase its equipment requirements. The rise in sales was the direct result of higher farm income and the agricultural industry's response to the world's need for more food.

**The price for potash** was \$25.50 per ton at the beginning of the year and held firmly until February when it was increased to \$30 in response to the demand-supply situation. At the start of the new fertilizer year, July 1, the upward pressure on prices increased, resulting in a rise to \$37 per ton in October. This price remained in effect for the remainder of the year, not

because of any improvement in the supply situation but rather because of the uncertainty caused by the Government of Saskatchewan's proposed resource taxes.

**Canadian sales** accounted for 12% (8% in 1973) of total sales, the U.S. market took 62% (62%) and sales overseas dropped to 26% (30%). Exports were handled by Canpotex, the export agency formed by producers; Canadian sales were handled by Sylvite's own sales staff while Terra Chemicals continued to be Sylvite's major sales agency throughout the U.S. Midwest through a complex of wholly owned retail outlets.

**Production plans** were changed to meet the increased demand for product and both four-rotor mining machines were allocated to production mining. The refinery operated at maximum capacity throughout most of the year and monthly production several times exceeded the design rate of 100,000 tons, reaching 114,000 tons in April, the high for the year. Production was reduced for several months to the 90,000 ton-per-month level because one of the mining machines had to be switched to development work following the completion of mining in one panel. A total of 1,105,005 tons of product was shipped, compared with 896,689 tons in 1973; a monthly loading record of 128,430 tons was set in April.

**Reserves at year-end** totalled 350 million tons, compared with 364 million tons at year-end 1973.

Mining plans were reassessed in the light of increased demand for potash and it was decided to purchase a third four-rotor mining machine and auxiliary equipment. Delivery is expected early in 1977. The third machine will ease the workload on the present machines since they are now being used for both development and production mining.

Plans have also been drawn up to increase the capacity of the production hoist late in 1975 or early in 1976 to assist in maintaining full production.

**Two major construction projects** were completed: a 320-foot extension to the potash storage building on surface; an extension to the mainline conveyor underground.

At year-end there were 246 employees on the payroll, 29 more than at year-end 1973. The additional em-

ployees are mostly maintenance personnel. A full-time supervisor of employment development was taken on staff to expand training activities which include familiarization sessions for new employees, a maintenance planning course for maintenance supervisory personnel and an advanced course for all supervisors.

**Francana Minerals Ltd.** Sodium sulphate remained in short supply throughout the world and producers had difficulty meeting the demand at year-end. Prices of both salt cake and detergent grades increased substantially and the levels reached for 1975 sales should provide a satisfactory return on investment.

The Grant plant near Cabri, Sask., produced at its capacity of 60,000 tons per year; practically all the tonnage was high-quality detergent grade. Sodium Sulphate (Saskatchewan) Ltd., of Alsask, Sask., wholly owned by Francana, put its Hardene plant back into operation to supply salt cake to kraft pulp mills. Nearly 40,000 tons were produced, beginning in late January.

Both plants performed well throughout the year and sales were limited only by the capacity of the plants. Financial results improved to a satisfactory level by year-end, the result of higher prices.

**In spite of forecasts** of an economic slowdown in 1975, the demand for sodium sulphate appears to be firm well beyond the end of 1975. Little new capacity is in sight and there is less sodium sulphate available from byproduct producers, notably the rayon industry. Shortages of other chemicals which have been used in place of sodium sulphate, particularly caustic soda, are expected to persist for some time. Kraft pulp mills are running at capacity and there are no indications of significant cutbacks during 1975. Forecasts beyond mid-1975 predict a continuing shortage of kraft pulp.

The detergent makers, apparently having devised formulas that use substantially more sodium sulphate than was used prior to the restrictions on phosphate content, are now looking for assured supplies of sodium sulphate for as far ahead as 1977.

In view of the critical shortage of sodium sulphate and improved prices, plans were approved to increase the annual capacity of the Grant plant to 100,000 tons of detergent-grade sodium sulphate, starting in the second quarter of 1975.



*Sylvite of Canada's potash complex near Rocanville, Saskatchewan*

**The present method of recovering** raw material from the sodium sulphate deposits has been dependent on weather conditions, based on solution of salts from the lake bed in summer and crystallization on cooling in late fall. This method will not supply enough raw Glauber's salts for the increased plant capacity. To assure a positive supply of raw material, a portable hydraulic cutter-head dredge that mines the salts direct from the lake bed was purchased. Auxiliary equipment to remove impurities from the dredged salt is also being installed, for initial operation in the spring of 1975. The dredge has sufficient capacity to produce raw material for both plants and will be transported between them as required.

The outlook for sodium sulphate sales and prices for the next three to five years appears to be most favorable and financial results should improve in 1975.



Exploration drilling in Indonesia

## oil/gas

Francana Oil & Gas Ltd.'s consolidated gross revenue from all sources increased to \$18,495,589 from \$4,033,425 in 1973. Funds generated from operations totalled \$8,650,794, compared with \$2,308,013 in the previous year. Total exploration and development expenditures, including land acquisition and retention, geological and geophysical work, drilling and production equipment, totalled \$13,015,000, compared with \$1,761,000 in 1973. Net earnings were \$5,217,905, compared with \$1,117,762. in 1973.

Francana's sales of crude oil from North American operations totalled 923,000 barrels, compared with

1,143,000 barrels in 1973. The decrease was due to production curtailments in Saskatchewan, affecting particularly the sour medium-gravity crude; production was limited in some fields to 20% of capacity. This situation was primarily the result of the Saskatchewan posted prices and the Federal export taxes which made Saskatchewan crude noncompetitive in its traditional U.S. market. Sales of natural gas increased from 2,734 million cubic feet in 1973 to 3,190 million cubic feet in 1974. Trend's sales in the U.S. and Canada totalled 429,100 barrels of crude oil and 489 million cubic feet of natural gas.

**Trend's net share of crude-oil sales** in Indonesia totalled 1,600,000 barrels for an average of 4,300 barrels per day. Total gross production was 11,170,000 barrels, an average of 30,600 barrels per day. Production reached a peak of 50,000 barrels per day in June but declined substantially during the second half of the year, the result of an increase in the Indonesian crude oil posted price and a general softening in world demand. The marketing situation has since improved and gross production exceeded 50,000 barrels per day in January, 1975. It is expected that sales in 1975 will average 100,000 barrels per day as new wells are added to the pipeline stream and expansion of production facilities is completed.

**Francana's 1974 exploration** and development program involved direct participation in 35 wells, yielding five oil wells, eight gas wells and 22 abandonments. Oil discoveries were made in Alberta, at Majorville and Chin Coulee. One of the abandonments was a well offshore Cape Breton Island, which finished drilling in September. Indirect participation in 18 wells through land contributions and options resulted in two oil wells, seven gas wells, one service well and eight abandonments. Most of the 53 wells drilled were in Alberta. Trend participated in North America in the drilling of 18 wells, resulting in 12 oil wells, two gas wells and four abandonments. Ten of the oil wells were development wells.

**In Irian Jaya, Indonesia,** Trend's drilling activities were largely confined to development of the Walio oilfield. At year-end, the field contained 13 oil wells with a combined production capacity of 50,000 barrels per day. Seismic and well controls suggest that the area of the field is substantially larger than the combined area of the three previously discovered fields at Kasim, Jaya and Utara and could require the drilling of up to



*A pumping well in Saskatchewan*



Storage tank at Kasim marine terminal in Indonesia

30 additional development wells. A pipeline was scheduled for completion by February, 1975, to carry the Walio-field crude to the central processing facilities at Kasim marine terminal. Treating and storage facilities at the Kasim terminal are being expanded with a programmed capacity of 175,000 barrels per day by year-end 1975. Active exploration of the Production-Sharing Contract area is continuing. Numerous anomalies have been delineated by geomorphic and seismic studies and await evaluation by drilling. Subject to Pertamina's consent, one and possibly two drilling rigs may be added to the field operation in 1975. At year-end, there were two drilling rigs and two seismic crews on site.

**In the United Kingdom sector** of the North Sea, Trend participated in the drilling of an unsuccessful well on block 9/17. Future plans depend on the results of drilling to be carried out by other operators on concessions and adjoining Trend's block.

**In the Philippines**, Trend participated in the drilling of two unsuccessful offshore wells. A third well was drilled and abandoned in February, 1975. During the third quarter, Trend was awarded an exploration prospecting license covering 9.6 million acres in the Makran district of the Province of Baluchistan, Pakistan, bordering Iran.

**Francana's proven and probable additional reserves** at year-end were: crude oil and natural-gas liquids—18,255,000 barrels; natural gas—111.8 billion cubic feet. The comparable figures at year-end 1973 were 18,433,000 barrels and 101.6 billion cubic feet, respectively. These reserves do not include those held by Trend in Canada, the U.S. and Indonesia.

Francana's involvement in new exploration projects in Canada will be contingent on the restoration of a favorable investment climate. In the meantime, Francana will proceed with an orderly evaluation of its Canadian properties and continue to place, through Trend, special emphasis on participation in U.S. and overseas projects.

**Western Decalta Petroleum Limited's** gross income totalled \$14.4 million during 1974 (\$10.3 million in 1973). Net income was \$3.5 million, compared with \$2.1 million last year. Cash flow increased to \$9.8 million from \$6.7 million in 1973. Higher product prices were partially offset by increased royalty pay-

ments and higher taxes in Canada plus sharply higher operating costs. Expenditures for acquiring, finding and developing reserves of crude oil and natural gas in 1974 totalled \$11.5 million, compared with \$13.2 million in the previous year.

Gross production of crude oil and natural-gas liquids totalled 3,065,000 barrels in 1974. Gross natural-gas sales were 7.4 billion cubic feet.

**In North America**, Decalta participated in the drilling of 58 wells, of which 46 were in Alberta, resulting in 13 oil wells, 16 gas wells and 29 abandonments. Five drilling platforms have been ordered for operations offshore Texas; delivery of the first platform is expected in the summer of 1975. The U.S. Federal Power Commission recently increased the price for interstate gas to 51¢ per Mcf. In addition, it would appear that Decalta will qualify for the special small producer category and therefore could receive in the order of 50% more, or approximately 77¢ per Mcf. It is anticipated these properties will make a significant contribution to Decalta's cash flow, commencing in 1977.

**Decalta International Corporation**, a wholly owned subsidiary, has a 15% interest in a 67,800-acre Technical Assistance contract in Southern Sumatra, Indonesia. Six wells were drilled during the year: the first well was successful yielding 50° API crude at a calculated rate of 408 barrels per day; two others were also successful and three were abandoned.

In the United Kingdom, Decalta participated to the extent of 5% in the drilling of an offshore well on North Sea block 210/19. No commercial oil or gas shows were encountered and the well was abandoned.

In Guatemala, offshore Puerto Barrios, Decalta is entitled to earn a 4 1/3% working interest in 611,500 acres by incurring 8 2/3% of the cost of the first two test wells. Decalta also holds a seismic option in the Sibuyan Sea in the Philippines. Applications for exploration licences are pending in Norway and Kenya.

Decalta's proven and probable additional reserves of crude oil, including natural-gas liquids, and of natural gas at year-end were 35,564,000 barrels and 228 billion cubic feet, respectively.

During the year, Decalta purchased all the oil and gas-producing properties of the Hickerson Oil Company;

its properties are in Oklahoma, Kansas, Montana, North Dakota and Wyoming.

**Canadian Merrill Ltd.**, primarily an oil and gas company, has three wholly owned subsidiaries in the oil and gas industry: Provident Resources Limited has producing properties in Canada and the U.S. and manages drilling programs for U.S. investors; L & M Oilfield Equipment Limited sells and leases new and used oilfield equipment; Baldwin & Knoll Limited operates oilfield service rigs in Canada. Canadian Merrill also has certain mining interests.

Gross revenue from all operations for the fiscal year ended June 30, 1974, increased by 28% to \$10,263,000. Cash flow increased by 33% to \$2,203,000. Income before extraordinary items totalled \$650,000, compared with \$471,000, an increase of 38%. After providing for a \$300,000 reduction in investments in marketable securities, net income was \$388,000, compared with \$502,000 for the previous year.

**Natural-gas production** was 5.48 billion cubic feet, an increase of 38% from the 3.96 billion cubic feet for the previous year. Crude-oil production was 205,000 barrels, compared with 166,000 barrels, an increase of 23%. Canadian Merrill's drilling and development expenditures for its own account and on behalf of U.S. participants in the 1973 Provident Drilling Fund Program totalled approximately \$3.5 million. Plans for 1975 include participation in a major gas exploration program in the Foothills area of Alberta, exploratory and development drilling on properties owned in the U.S. and continued efforts to acquire attractive international prospects.

Proven and probable reserves totalled 1.8 million barrels of oil and 185 billion cubic feet of natural gas, approximately the same as for the previous year.

**Subsidiary operations.** Baldwin & Knoll Limited, the largest oil and gas well servicing company in Canada, supervised 41 rigs in the field. Revenue from well-servicing increased by 31% to \$4,840,000 and net profit was higher. L & M Oilfield Equipment Ltd. reports gross revenue was virtually unchanged from the 1973 level but net profit improved substantially, the result of higher profit from rentals. Sales were lower due to shortages of new and used equipment.



Separating and treating facilities, Kasim marine terminal



## manufacturing

**Zochem Limited.** The new plant built near Brampton, Ont., for Zochem by Hudson Bay Diecastings Limited came on stream around midyear. The design concepts proved to be satisfactory; mechanical problems during startup were rectified and satisfactory production was expected early in 1975.

The Montreal plant was phased out gradually during the last half of the year and was closed permanently on November 29. Cleanup operations in December continued into 1975; sale of the property was being negotiated at year-end.

**Sales of regular-grade product** were hampered throughout most of the year by a protracted strike in the rubber industry in Canada; the general slowdown in the economy in the last quarter of the year affected all grades of product. Sales were not as high as in 1973 but financial results were improved.

The outlook for 1975 is overshadowed by discouraging forecasts from the industry. Zochem's sales position, however, is considered to be strong in view of its

Oxidizing chamber at Zochem Limited's new plant near Toronto

product range and a satisfactory level of performance is expected.

The International Chemical Workers Union, which bargained for employees in Montreal, applied for and received certification for employees at the Brampton plant. A two-year contract was negotiated with the I.C.W.; the agreement expires on June 28, 1976.

**During the phasing-out period in Montreal**, a committee comprising representatives of the union, management and various levels of government was formed to help employees find other employment. Six persons requested and were granted a transfer to Brampton and 37 found satisfactory positions elsewhere. The committee continued to operate into early 1975.

**Hudson Bay Diecastings Limited.** Financial results set a record, reflecting the high level of activity in the automobile-manufacturing industry that lasted from the beginning of the year until the third quarter when consumer resistance to rising prices resulted in production cutbacks and massive layoffs both in Canada and the U.S.

Hudson Bay Diecastings, wholly owned by the Company, benefited from a relatively unhampered flow of zinc alloy from the parent company whereas many other diecasting plants in North America, particularly in the U.S., experienced difficulties obtaining adequate supplies.

With respect to production, the total weight of cast parts was somewhat lower than in 1973 but the total value was considerably higher due to a higher percentage of plated and assembled parts.

**The sharply lower demand** for automobiles in the third quarter coincided with the introduction of 1975 models and the entire industry and its suppliers experienced a severe shock that continued into 1975. The layoffs by automobile manufacturers in the wake of rising inventories of new models quickly spread throughout the supplier industries. In view of the current situation, Hudson Bay Diecastings is more conscious than ever before that its degree of dependency on the automobile industry for sales must be reduced considerably.

A new two-year labor contract signed with the United Automobile Workers expires September 30, 1976.



# The Hudson Bay Mining Group

## Principal addresses

### Mine offices

Hudson Bay Mining and Smelting Co., Limited  
Flin Flon, Manitoba R8A 1N9  
General manager: J.E. Goodman

Sylvite of Canada Division of Hudson Bay Mining and Smelting Co., Limited  
P.O. Box 270, Rocanville, Saskatchewan S0A 3L0  
General manager: F.J. Greeves

### Exploration offices

Hudson Bay Exploration and Development Company Limited  
P.O. Box 28, Toronto-Dominion Centre, Toronto, Ontario M5K 1B8  
Chief geologist: R.B. Cairns

Unit 52  
2 Thorncliffe Park Drive, Toronto, Ontario M4H 1H2  
Manager, Eastern exploration: P.L. Martin  
Flin Flon, Manitoba R8A 1N9  
Manager, Central exploration: J.G. Bragg

P.O. Box 49085-555 Burrard St., Bentall Centre Tower No. 2  
Vancouver 1, British Columbia V7X 1G6  
Manager, Western exploration: R.A. Freberg  
Box 4007, Whitehorse, Yukon Territory Y1A 3S9  
Resident geologist: R.T. McIntosh

### Subsidiary companies

Hudson Bay Diecastings Limited  
P.O. Box 1050, Brampton, Ontario L6T 1E9  
General manager: G.F. Clark

Zochem Limited  
P.O. Box 1050, Brampton, Ontario L6T 1E9  
General manager: G.F. Clark

Francana Oil & Gas Ltd.  
630-6th Ave. S.W., Calgary, Alberta T2P 0S8  
General manager: N.D. Knowles

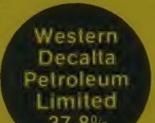
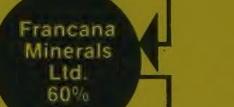
Francana Minerals Ltd.  
670 Bank of Canada Bldg., Regina, Saskatchewan S4P 0M8  
General manager: R.V. Tomkins

## Base metals

## Oil/Gas

## Fertilizers Chemicals

## Manufacturing



\*operated by Hudson Bay Mining on a profit sharing basis

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